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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/674,589 | CHE ET AL. | |
| | Examiner | Art Unit | |
| | David P. Bryant | 3726 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment and RCE request filed 6/16/05.
2. ☒ The allowed claim(s) is/are 1,3,5-7,9-12 and 25.
3. ☒ The drawings filed on 02 November 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date <u>050803</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

CONTINUED EXAMINATION UNDER 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 16, 2005, has been entered.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

12. (Currently Amended) The method of claim[s] 9 [or 10] wherein a thickness of the slabs casted in the continuous caster is 100mm, and the slabs undergo liquid core reduction to a thickness of 80mm.

This change was necessary since this multiple dependent claim was dependent on claim 9, which itself is dependent on multiple dependent claim 5. As noted in MPEP 608.01(n), a multiple dependent claim may not serve as a basis for any other multiple dependent claim, either directly or indirectly.

25. (New) The method of claim 10 wherein a thickness of the slabs casted in the continuous caster is 100mm, and the slabs undergo liquid core reduction to a thickness of 80mm.

This claim was added to provide coverage for this feature, which was removed from improper multiple dependent claim 12.

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Non-elected claims 13-15, 17-19, and 21-24 have been CANCELED without prejudice.

Election was made *without* traverse in the reply filed September 13, 2004.

PROPERLY MARKED-UP CLAIM

The following is a copy of independent claim 1 that is properly marked-up from its previously submitted state of September 13, 2004. Although the amendment submitted on June 16, 2005, included substantial amendments to claim 1, only the step of "heating the cut slabs to a ~~predetermined temperature~~ 1000°C or above to form MnS precipitation on the cut slabs in a first heating furnace;" was properly indicated, while the other changes were not identified. *It is thus noted that the following claim has not been further amended by the examiner, but has instead simply been presented in its proper form to precisely identify the amendments made by applicant in the amendment filed June 16, 2005.*

1. (Currently Amended) A method for manufacturing hot rolled steel sheets comprising the steps of:
 - passing molten steel through a continuous caster having a mold after having been poured into a ladle and tundish to manufacture a slab;
 - cutting the slab to predetermined lengths using a cutter to form a plurality of cut slabs;
 - heating the cut slabs to [a predetermined temperature] 1000°C or above to form MnS precipitation on the cut slabs in a first heating furnace;
 - width rolling the cut slabs by using a width roller;
 - descaling the cut slabs [in a reduction unit to a predetermined thickness to form a plurality of flat bars] heated in the first heating furnace;

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rolling the slabs in a reduction unit to a predetermined thickness [in a second heating furnace] to form a plurality of flat bars;

heating the flat bars to a predetermined temperature in a second heating furnace;

coiling the flat bars by a coiling station while the flat bars are maintained in a heated state;

uncoiling the flat bars by an uncoiler; and

rolling the flat bars to a predetermined thickness in a finishing mill [in a reversible manner].

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art fails to teach or fairly suggest the series of steps recited, particularly heating the flat bars in a second heating furnace, and coiling the flat bars while the flat bars are maintained in a heated state, in combination with the other recited steps. Also, the prior art fails to teach the additional step of heating the cut slabs in the first heating furnace to form MnS precipitation on the cut slabs. As argued by applicant, this step provides the advantages discussed in the specification at page 7, lines 4-22.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Bryant whose telephone number is (571) 272-4526. The examiner can normally be reached on Monday-Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David P. Bryant
Primary Examiner
Art Unit 3726

dpb
6/27/05